

Title (en)  
NITROGEN REMOVAL METHOD, NITRIFICATION-REACTION PROMOTING AGENT FOR WATER TREATMENT, AND WATER TREATMENT METHOD

Title (de)  
STICKSTOFFENTFERNUNGSVERFAHREN, NITRIFIKATIONSREAKTIONSFÖRDERUNGSMITTEL ZUR WASSERBEHANDLUNG UND WASSERBEHANDLUNGSVERFAHREN

Title (fr)  
PROCÉDÉ DE RETRAIT D'AZOTE, AGENT FAVORISANT LA RÉACTION DE NITRIFICATION POUR LE TRAITEMENT D'EAU, ET PROCÉDÉ DE TRAITEMENT D'EAU

Publication  
**EP 3369713 A4 20190522 (EN)**

Application  
**EP 16859541 A 20161007**

Priority  
• JP 2015211586 A 20151028  
• JP 2015211587 A 20151028  
• JP 2016080007 W 20161007

Abstract (en)  
[origin: EP3369713A1] Disclosed herein is a method for removing nitrogen from water, which makes it possible to omit equipment for controlling the supply of a carbon source (hydrogen donor), equipment for post-processing a carbon source (hydrogen donor), and circulation equipment and to prevent an increase in the size of a system. The method includes adding a solid material containing a biodegradable resin as a hydrogen donor to one water system in which bacteria cells having an ability to decompose a biodegradable resin, bacteria cells having nitrification capabilities, and bacteria cells having denitrification capabilities live together to allow a nitrification reaction and a denitrification reaction coexist in the water system. Also disclosed herein is a nitrification-reaction promoting agent for water treatment including 20 wt% or more of a biodegradable resin and having a specific gravity of more than 1 g/cm<sup>3</sup>.

IPC 8 full level  
**C02F 3/30** (2006.01); **C08G 63/00** (2006.01); **C08L 67/04** (2006.01)

CPC (source: EP US)  
**C02F 3/301** (2013.01 - EP US); **C02F 3/302** (2013.01 - EP US); **C02F 3/303** (2013.01 - US); **C02F 3/305** (2013.01 - EP US); **C02F 3/348** (2013.01 - US); **C08G 63/00** (2013.01 - US); **C08G 63/08** (2013.01 - US); **C08G 63/16** (2013.01 - US); **C08L 67/04** (2013.01 - EP US); **C08L 101/16** (2013.01 - EP US)

Citation (search report)  
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• [X1] MERGAERT J ET AL: "Identity and Potential Functions of Heterotrophic Bacterial Isolates from a Continuous-Upflow Fixed-Bed Reactor for Denitrification of Drinking Water with Bacterial Polyester as Source of Carbon and Electron Donor", SYSTEMATIC AND APPLIED MICROBIOL, URBAN & FISCHER, AMSTERDAM, NL, vol. 24, no. 2, 25 May 2001 (2001-05-25), pages 303 - 310, XP004957305, ISSN: 0723-2020, DOI: 10.1078/0723-2020-00037  
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• [A] A. HIRAISHI ET AL: "Application of polyhydroxyalkanoates for denitrification in water and wastewater treatment", APPLIED MICROBIOLOGY AND BIOTECHNOLOGY, vol. 61, no. 2, 14 January 2003 (2003-01-14), DE, pages 103 - 109, XP055581998, ISSN: 0175-7598, DOI: 10.1007/s00253-002-1198-y  
• See also references of WO 2017073304A1

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Designated contracting state (EPC)  
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**EP 16859541 A 20161007**; JP 2016080007 W 20161007; JP 2017547713 A 20161007; US 201615770868 A 20161007; US 201916699390 A 20191129